L 21189-66   EWT(m)/EWP(j)/EWP(t)   IJP(c)   JD/WW/JG/RM

ACC NR: AP6008051   SOURCE CODE: UR/0020/66/166/004/0891/0893

AUTHOR: Boldyrev, V. V.; Oblivantsev, A. N.; Raytsimling, A. M.; Uskov, Ye. M.

ORG: Institute of Chemical Kinetics and Combustion, Siberian Branch, Academy of Sciences SSSR (Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR); Scientific Research Institute of Nuclear Physics, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki pri Tomskom politekhnicheskom institut)

TITLE: The mechanism governing the effect of preliminary irradiation on the thermal decomposition of alkali metal permanganates

TOPIC TAGS: thermal decomposition, radiolysis, manganese compound, permanganate

ABSTRACT: It is an accepted hypothesis that the acceleration in the thermal decomposition of irradiated permanganates is caused by radiochemical processes which form radiolysis products. The present study was carried out in order to find out which of these products can act as catalysts and how the mechanism of this process

UDC: 537.57 + 541.17

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L 21189-66
ACC NR: AP6008051 C

can be interpreted. It is shown that factors which increase the concentration of
free electrons or $MnO_4^=$ ions in the permanganate lattice cause a decrease in the
rate of thermal decomposition (e. g., the introduction of manganate ion into potas-
sium and cesium permanganate crystals by cocrystallization from aqueous solutions).
The solid radiolysis product catalyzing the thermal decomposition of irradiated per-
manganates is thought to be MnO_2 and the acceleration effect results from the com-
bination of the following factors acting in two opposite directions: the accelerat-
ing effect of MnO_2 and inhibiting effect of $MnO_4^=$, both of which are formed during
the radiolysis of permanganates. The paper was presented by Academician V. V.
Voyevodskiy on 7 June 1965. Orig. art. has: 1 figure.

SUB CODE: 07/   SUBM DATE: 11May65/   ORIG REF: 010/   OTH REF: 011

Card 2/2 ddw

ARIYEVICH, A.M.; LENSKIY, Yu.V.; USKOVA, G.V.

New lamp for the luminescent diagnosis of skin diseases. Vest. derm.
i ven. 38 no.4:54-55 Ap '64.   (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh
instrumentov i oborudovaniya (dir. I.P.Smirnov) i TSentral'ayy
kozhno-venerologicheskiy institut (dir. - kand.med.nauk N.M.
Turanov), Moskva.

L 36516-65

ACCESSION NR: AP5010490

UR/0243/64/000/009/0049/0052

9

AUTHOR: Uskova, G. V.

TITLE: Soviet-produced bactericidal irradiators

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1964, 49-52

TOPIC TAGS: medical supply, hospital equipment, chemical laboratory apparatus, bacteria

ABSTRACT: In the SSSR,   three kinds of bactericidal irradiators are pro-
duced: the stationary NBO (nastennyy bakteritsidnyy obluchatel'; wall
bactericidal irradiator), the PBC (potolochnyy bakteritsidnyy obluchatel';
ceiling bactericidal irradiator), and the MBO (peredvizhnoy bakteritsidnyy
obluchatel' mayachnyy tip; portable bactericidal irradiator of the beacon
type). The wall-type irradiator is mounted on a stand 2-2.5 meters from
the floor and employs two BUV-30 P bactericidal lamps and a discharge-
regulating device consisting of two ballast coils and two starters. This
irradiator is designed to disinfect air in rooms up to 30 cubic meters in
volume. The beacon type irradiator produces at a distance of 5 meters in
the radiation plane a radiation intensity of 8.2 millicoulombs/cm^2. Since

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L 36516-65

ACCESSION NR: AP5010490

the irradiation dose fatal for various kinds of microorganisms, except for spore and fungal forms, is 5 millicoulombs . sec/cm^2, an exposure of less than one second is needed to kill microorganisms. Orig. art. has 4 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya, Moscow (All-Union Scientific Research Institute of Medical Instruments and Equipment)

SUBMITTED: 28May64   ENCL: 00   SUB CODE: LS

NO REF SOV: 000   OTHER: 000   JPRS

Card 2/2

KALNINA, N.A., kand.tekhn.nauk; USKOVA, K.I., inzh.

Use of silicon organic compounds for decreasing moisture
absorption by cellular concretes. Trudy Zap.-Sib.fil.ASiA
no.3:139-146 '60.   (MIRA 15:2)
                    (Air-entrained concrete)
                        (Waterproofing)

PROCESSES AND PROPERTIES INDEX

Vapor pressures of solutions of acids and salts in liquid ammonia at 15°. A. I. Shatenshtein and L. S. Uskova. *Acta Physicochim. U. R. S. S.* 3, 337–44 (1935)(in German).—The osmotic coeffs. of salts in liquid NH₃ soln. increase in the order NH₄OAc, NH₄Cl, NaCl, NH₄Br, NH₄NO₃, NH₄NO₃, NH₄I. The values of d¹⁵ for liquid NH₃ is 0.6182. For solns. of salts contg. the stated amts. of salt per 100 g. of NH₃ values of d¹⁵ were: NH₄Cl, 4.96 g., 0.641, 20.80 g., 0.719; NH₄Br 3.80 g., 0.641, 35.56 g., 0.817; NH₄NO₃ 6.76 g., 0.654, 27.46 g., 0.744; NaNO₃, 4.16 g., 0.643, 31.00 g., 0.781; NaCl 1.90 g., 0.632, 6.80 g., 0.683; NaCl 1.96 g., 0.638, 8.31 g., 0.640. The vapor pressure of NH₃ at 15° is 5462.5 mm. The vapor-tension lowerings in mm. due to y moles of salt dissolved in 1000 g. of NH₃ at 15° were: NH₄Cl 21 at 0.304 mole, 57 at 0.761, 127 at 2.721; NH₄Br 17 at 0.198, 58 at 0.708, 340 at 2.956, 381 at 4.317; NH₄NO₃ 20 at 0.253, 60 at 0.745, 208 at 2.233; NaNO₃, 22 at 0.229, 84 at 0.981, 220 at 2.525; NaCl 32 at 0.375, 62 at 0.797, 85 at 1.008; NH₄I 46 at 0.290, 192 at 1.064; NH₄OAc 72 at 1.010; NH₄Cl, at 10°, 97 at 1.365. The low osmotic coeffs. are due to the low dielec. const. of liquid NH₃, and rise with the latter and the cond. coeff. as the temp. is lowered.

P. H. Rathmann

ASM–SLA METALLURGICAL LITERATURE CLASSIFICATION

KHAKHINA, L.P.; USKOVA, L.S.; KAGAN, L.M.

Objective method for evaluating the coloring of potato chips.
Kons. i ov.prom. 18 no.9:37-38 S '63.   (MIRA 16:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
                              (Potato chips—Testing)

USHOVR, Y.

BRUNT', V.O.; KARSKAYA, T.N.; kand.khim.nauk; KOSHELEVA, O.N., kand.khim. nauk; MALKIEL', O.B.; POSLAVSKAYA, K.D.; UEDINOVA, N.A.; USKOVA, L.Ye.; FLORENSKAYA, T.N.; RESHETINA, S.V., red.; MATVEYEVA, A.Ye., tekhn.red.

[Organic reagents and chemicals for laboratory practice; technical specifications] Reaktivy i preparaty dlia laboratornykh rabot organicheskie; tekhnicheskie usloviia. [Moskva] Standartgiz. Pt.1. 1957. 136 p.   (MIRA 11:6)

1. Russia (1923-   U.S.S.R.) Ministervo khimicheskoy promyshlen- nosti. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut khimiche- skikh reaktivov Ministerstva khimicheskoy promyshlennosti (for all except Reshetina, Matveyeva)
         (Chemical tests and reagents--Standards)

BRUDZ', V.G.; USKOVA, L.Ye.; NOVKOVSKAYA, N.A.; POSLAVSKAYA, K.D.; RAKOVSKAYA,
V.A.; PETROVA, G.D.; BROVKIN, L.V., red.; SHPAK, Ye.G., tekhn. red.

[Manual of technical specifications for reagents and preparations
used in laboratory work; organic reagents and preparations] Sbor-
nik tekhnicheskikh uslovii na reaktivy i preparaty dlia laboratornykh
rabot; organicheskie reaktivy i preparaty. Moskva, Gos.nauchno-
tekhn.izd-vo khim.lit-ry. 1961. 582 p.   (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimreaktivov i
osobo chistykh veshchestv Gosudarstvennogo komiteta Soveta Ministrov
SSSR po khimii (for all except Brovkin, Shpak).
                    (Chemical tests and reagents)

USKOV, V.S.; USKOVA, N.D.

Model calorimetric instrument for reproducing the quantity unit
of heat. Trudy VNIIM no.34:5-16 '58.   (MIRA 13:5)
(Calorimeters)

S/580/61/000/000/005/016
A057/A126

AUTHORS: Chirko, A.I.; Uskova, N.F.

TITLE: Products and kinetics of autoxidation of cycloheptene and the effect of the ring size on the autoxidation rate

SOURCE: Yerofeyev, B.V. and Tishchenko, I.G., eds. Zhidkofaznoye okisleniye nepredel'nykh organicheskikh soyedineniy, Minsk, 1961, 51 - 62

TEXT: The primary product of autoxidation of cyclopentene was separated for the first time, its physico-chemical characteristics were determined and also the secondary products of autoxidation investigated. Further were investigated the kinetics of the autoxidation of cyclohexene with and without 9 different admixtures, and they were compared with cycloheptene and cyclopentene to study the effect of the ring size on the rate of autoxidation. The method of investigation was described in an earlier paper. Among the substances tested as initiators, cobalt and manganese butyrates showed the highest activity and stearates increased 3 - 10 times the percentage of oxidation in relation to runs without admixtures. Increased activity of the initiators with the same cation can be effected by increasing the number of carbon atoms in the anion of the initiator. The primary

Card 1/2

autoxidation product was obtained by autoxidation of cyclopentene at 50°C during 2 h in the presence of 1% manganese stearate. An analysis of the fraction boiling at 51°C/0.1 torr indicated a rather pure hydroperoxide of 1-hydroperoxidecycloheptene-2. Partial isomerization of the product is possible with the formation of minute quantities of methylcyclohexene-hydroperoxide. Dialkylperoxide and dialkyl were determined in the remainder, i.e., as secondary product of autoxidation. The formation of these substances is explained by the rupture of the chain reaction during the autoxidation of cyclopentene. The activation energy of cyclohexene autoxidation in the presence of manganese butyrate was calculated with 16,874 cal/mole. Experiments on the effect of the concentration of the initiator on the rate of autoxidation were carried out at 50°C in the presence of 0.25, 0.5, and 2% cobalt stearate. The dependence of the maximum rate of oxidation on the

concentration of cobalt stearate can be expressed by the equation $V_m = \dfrac{a[u]}{1 + b[u]}$, ($V_m$ - rate, a and b - constants, [u] - concentration of the initiator). Experiments on the effect of the size of the cyclene ring showed the following sequence in relation to the autoxidation rate: cyclohexene > cycloheptene > cyclopentene. The effect of the cyclene concentration on the rate of autoxidation, studied in the presence of 1% cobalt stearate, showed that the dependence of the maximum rate can be expressed by $V_m = KC^n$. There are 4 figures and 6 tables.

Card 2/2

AKHREM, A.A.; UKHOVA, L.I.; USKOVA, N.F.

Heterocyclic analogs of corticosteroids. Report No.1:
Syntheses based on 1,2-dimethyl-4-oxo-decahydroquinoline.
Izv. AN SSSR Otd.khim.nauk no.2:304-309 F '62.

(MIRA 15:2)

1. Institut fiziko-organicheskoy khimii AN Belorusskoy SSR
i Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

(Quinoline)

(Corticosteroids)

UKHOVA, L.I.; AKHREM, A.A.; USKOVA, N.F.

Stereochemistry of the synthesis of
1,2-dimethyl-4-ethinyl-4-hydroxydecahydroquinolines.   Izv.AN
SSSR Otd.khim.nauk   no.5:951-953   My '63.   (MIRA 16:8)

1. Institut fiziko-organicheskoy khimii AN BSSR i Institut
 organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
                    (Quinoline) (Stereochemistry)

SOV/58-59-8-17620

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 93 (USSR)

AUTHORS: Uskov, V.S., Uskova, N.S.

TITLE: Investigation of a Model Calorimetric Device for Reproducing the Unit
              of Heat Quantity

ABSTRACT: A calorimeter is described, which is based on the principle of determining
              the heat value of a calorimetric system by means of ar. electrical method.
              Heat is fed into the calorimeter by means of a heater through whose coils
              a direct electric current passes. The intensity of the current and the
              voltage are measured by means of the compensation method. The time of
              passage of the current is measured by means of a chronograph. The heat
              value of the system is computed from the increase in temperature of the
              water.

Card 1/1

USKOVA, N.S.; USKOV, V.S,

Development of a method for preparing pure copper for metrologi-
cal purposes. Trudy VNIIM no.34:67-72 '58.

(MIRA 13:5)

(Copper)

USKOVA, N. S.

Distr: 4E2c

Development of a method of preparation of pure silver for meteorological purposes. N. S. Uskova. Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Metrol. im. D. I. Mendeleeva 1958, No. 34, 73–87.—Redn. of multiply recrystd. $AgNO_3$ with $HCOONH_4$ and electrolysis of a $AgNO_3$ soln. with a sol. anode were investigated. $AgNO_3$ prepd. from HNO_3, contg. nonvolatile residue 0.0015, heavy metals 0.0005, Fe 0.00005, As 0.000003, SO_4^{--} 0.0005, and Cl^- 0.0002% purified by 5 redistns. and from 99.992% pure Ag was used in the expts. Electrolysis of electrolytes contg. 2, 4, and 6% $AgNO_3$ and 5% free HNO_3 was conducted at 0.01–0.03 amp./sq. cm., 1 amp./l., and a distance of 8 cm. between electrodes. The Ag powder obtained in the expts. was cooled in a stream of H. Melting expts. were performed in an atm. of H having a humidity of 0.2 mm. Hg. $HCOONH_4$ as reducing agent gave a metal of higher quality (contg. less Fe, Cu, and Si) than HCOONa. The electrolytic Ag was still of higher quality, i.e. 99.9909% pure contg. Cu 0.00001, Ca 0.00004, Mg 0.00001, and H contg. 0.00004%. Impurity of electrolytic Ag increased at higher electrolyte concns. in the range studied. Cu content of Ag increased while electrolyzing a 2% $AgNO_3$ electrolyte with c.d. increase. In a 4–6% electrolyte, Fe and Sn contents in the product also increased at increased c.d. Optimal conditions of electrolysis are: an electrolyte contg. 2% $AgNO_3$ and 0.5% free HNO_3, c.d. 0.01 amp./sq. cm., at a voltage of 1.3 v. The presence of a dense diaphragm had no effect on the purity of electrolytic Ag.

Mordecai Medwied

USKOVA, N. V.

"The Effect of Certain Derivatives of Guanidine and Aminopyridine on the Reactivity of Skeletal Muscles to Calcium Ions," a report presented at the 570th meeting of the Pharmacology and Toxicology Section, Leningrad Society of Physiologists, Biochemists, and Pharmacologists im. I. M. Sechenov, 9 June 1954, Farm. i Toks., Ju-Aug. 1955, pp. 60-63.

Chair of Pharmacology, Leningrad State Pediatric Medical Institute

Sum. 900, 26 Apr 56

USKOVA, N.V.

Influence of poisons, imparing coupled phosphorylation, on the
transmission of an impulse from a nerve to a muscle. Trudy
Vses. ob-va fiziol., biokhim. i farm. 4:190-191 '58.

(MIRA 14:2)

1. Laboratoriya obshchey farmakologii Instituta eksperimental'noy
meditsiny AMN SSSR (zav. laboratoriyey prof. V.M. Karasik).
            (POISONS—PHYSIOLOGICAL EFFECT)
                    (MUSCLES)

USKOVA, N.V.

Hyperkinesis of central origin caused by tetridine and its
inhibition with choline-sensitizing substances. Biul. eksp.
biol. i med. 52 no.7:73-75 Jl '61.   (MIRA 15:3)

1. Iz kafedry farmakologii (zav. - deystvitel'nyy chlen AMN
SSSR V.M. Karasik) Leningradskogo pediatricheskogo meditsinskogo
·instituta. Predstavelena deystvitel'nym chlenom AMN SSSR V.M.
Karasikom.
             (TETRIDINE--PHYSIOLOGICAL EFFECT)
       (PARASYMPATHOLYITICS) (MOVEMENT DISORDERS)

USKOVA, O.N

C.I.

Testing of steel rails. O. Uskova. *Soimunilshkil Transport* 1939, No. 3, 59-71. Bessemer and open-hearth rails (sorbitized and nonsorbitized) were tested against wear and deformation on different railroad sections subject to varying traffic conditions. The results indicate that lab. tests of rails (chem. and mech. properties) agree very often with the field tests but the latter fill in the gaps left by the lab. tests. It is stated that the serviceability of rails should be evaluated on the basis of lab. and field tests.
R. Z. Komich

METALLURGICAL LITERATURE CLASSIFICATION
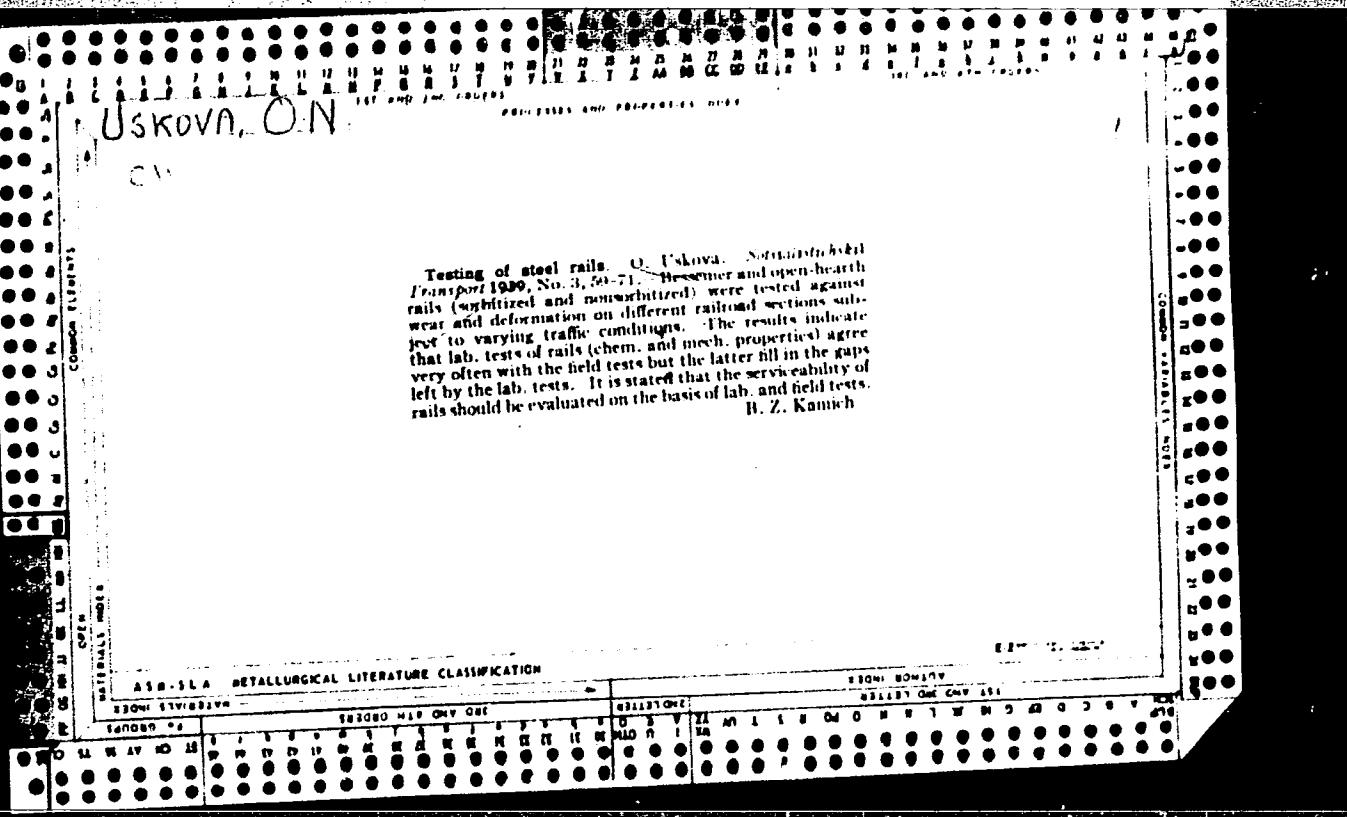
USKOVA, O N.

•42. **Quality and Service of Open Hearth Steel Rails from the Kertch Works.** (In Russian.) L. L. Pinchusovitch and O. N. Uskova. *Bulletin of the Academy of Sciences of U.S.S.R.*, Section of Technical Sciences, no. 10, 1946, p. 1421-1429.

Describes an experimental investigation of the properties of steel rails produced from an arsenic-containing ore in the open-hearth. The wear properties of the rails were higher than those produced from other ores, and the arsenic content (0.09 to 0.15%) did not affect the strength of the steel.

METALLURGICAL LITERATURE CLASSIFICATION

USKOVA, O.N., kandidat tekhnicheskikh nauk.

Operational tests of RT50 rails on the Transcaucasus Railroad.
Trudy TSNII MPS no.111:124-135 '55.   (MLRA 9:5)
(Railroads--Rails)

USKOV, I.O.; USKOV, O.T.

Colloidal and chemical properties of alumina suspensions. Nauk.zap.
Ky17.un. 16 no.15:49-53 '57.
         (Alumina)   (Colloids)   (MIRA 11:11)

USKOVA, O. N., kandidat tekhnicheskikh nauk.

The problem of raising the quality of rails. Zhel.dor.transp.
39 no.2:40-44 F '57.   (MLRA 10:3)
          (Railroads--Rails)

USKOVA, O.N., kand.tekhn.nauk

Contact damage to rails on curves and the fight against it. Vest.
TSNII MPS 18 no.1:38-40 F '59.   (MIRA 12:3)
        (Railroads--Rails) (Railroads--Curves and turnouts)

BAULIN, I.S., inzh.; D'YAKONOV, V.N., kand,tekhn.nauk.; USKOVA, O.N., kand.
tekhn.nauk.; SHUR, Ye.A., inzh.; KONYYKHOV, A.D., inzh.; AFANAS'YEV,
L.U., inzh.; EVLIKANOV, A.V., inzh.

Investigating the mechanism of rail contact-fatigue damages
(defects 82 and 64). Vest.TSNII MPS 21 no.4:27-30 '62.   (MIRA 15:6)
        (Railroads--Rails--Defects)

DOKUCHALOVA, V.V.; USKOVA, S.G.; KHANDEL'SMAN, Yu.M.

Cylindrical stone mounting with a low moment of starting.
Priborostroenie no.2:15-18 F '63.   (MIRA 16:5)
(Instruments)

USKOVA, V.Ya.

Swedish fly and the leaf beetle Chaetocnema aridula on grain.
Zashch. rast. ot vred. : bol. 9 no.7:39 '64.   (MIRA 18:2)

1. Shumikhinskiy punkt sluzhby ucheta i prognozov, Kurganskaya
oblast'.

USKOVA, Ye. T.

Dissertation: "Electrokinetic and Hydrophylic Properties of Clay." Cand Chem Sci,
Kiev State Univ., Kiev, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 4, Feb 54)

SO: SUM 243, 19 Oct 54

USKOVA, Ye.T.

Hydrophilic properties of clays of the kaolinite group [with summary in English]. Koll. zhur. 19 no.6:747-751 N-D '57.   (MIRA 11:1)

1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk, Kiyev.
(Kaolinite)

Ç / S L U V A,   Y ε . T.

AUTHOR: Uskova, Ye.T.   69-20-1-14/20

TITLE: The Hydrophilic Properties of Montmorillonitic Clays (O gidro-
            fil'nosti montmorillonitovoy gliny)

PERIODICAL: Kolloidnyy Zhurnal, 1958, Vol XX, # 1, pp 102-105 (USSR)

ABSTRACT: The hydrophility of montmorillonite clays has been studied
            only in regard to the content of one ion. The hydrophility in
            the presence of two and more cations is unknown. In the article,
            the change of hydrophility of bentonites in various correlations
            of one- and two-valency cations is investigated. The hydrophi-
            lity is determined as the quantity of water bound by the sur-
            face of 1 gram of the measured specimen. The quantity of water
            is investigated by a Dumanskiy indicator. Sucrose was used as
            an indicator. Fig. 1 shows that at a content of 20-40% of the
            adsorption capacity for cations, the hydrophility increases
            sharply and reaches a maximum. The ζ -potential of these pre-
            parations was measured by electrophoretic and electroosmotic
            methods. The hydrophilic and ζ -potential curves run parallel
            (Fig. 1 and 2). It may be concluded that the predominant factor
Card 1/2   in the binding of water is the ζ -potential.

The Hydrophilic Properties of Montmorillonitic Clays   69-20-1-14/20

There are 2 figures, 1 table, and 7 Soviet references.

ASSOCIATION: Ukrainskaya sel'skokhozyaystvennaya akademiya, Kiyev
(Ukrainian Agricultural Academy, Kiyev)

SUBMITTED: September 25, 1956

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Uskov, I.A., Uskova, Ye.T.   SOV-69-58-4-14/18

TITLE: Electrochemical Study of Bentonite Suspensions (Elektrokhimi-
                cheskoye izucheniye bentonitovykh suspenziy) 2. The Action of
                Sodium Hydroxide with Time on Suspensions of Electrodialyzed
                Ascangel (2. Deystviye gidrookisi natriya na suspenziyu
                elektrodializovannogo askangelya vo vremeni)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 487-492 (USSR)

ABSTRACT: In the oil industry, great quantities of clay treated with acids
                are used. In the food industry, they are used for the purifi-
                cation of oil. The origin of natural acid bentonites has been
                studied recently by several investigators. In the article, the
                neutralization of electrodialyzed bentonite by strong alkali
                is considered. The potentiometric and conductimetric titration
                curves at various time intervals were obtained. The first
                series of measurements was made 5 min after addition of the
                alkali, the second after 24 hours, and others after 8 and 14
                days. The conductimetric and potentiometric results are given
                in Figures 1 and 2. The potentiometric curve after addition
                of the alkali is similar to the titration curve of a weak
                monobasic acid with strong alkali. It is characterized by an
                inflexion at pH 8.3 corresponding to absorbed alkali in the
Card 1/3   quantity 675 μeq/g. After two days in the field of high pH-

SOV-69-58-4-14/18

Electrochemical Study of Bentonite Suspensions. 2. The Action of Sodium
Hydroxide with Time on Suspensions of Electrodialyzed Ascangel

values, a second inflexion is observed. In Figure 2, the point
of neutralization corresponds to 855μeq/g. All curves of
potentiometric titration are characterized by a strong in-
crease of pH on addition of small quantities of alkali. In
the middle parts of the curves a slow increase is observed.
The point of equivalence is clearly marked at pH 8.2-8.4.
Figure 3 shows that there is no noticeable influence of the
CO_2 in the air on the pH value of the suspension. The Al-ions
in the disperse medium at equilibrium are considerably hydro-
lyzed and ensure the acidity of the suspension. The second
inflexion in the potentiometric curve is connected with the
solution of aluminum hydroxide which is transformed into
aluminate. This inflexion appears after one day and becomes
marked after a week. The experiments have shown that the
neutralization of electrodialyzed bentonite by alkali takes
place slowly. Figure 4 shows the change of the absorbed
quantity of sodium hydroxide with time corresponding to the
point of equivalence on the first inflexion of the potentio-
metric titration curve. The conductimetric titration con-

Card 2/3   firms the presence of ion-exchange aluminum in electro-

SOV-69-58-4-14/18

Electrochemical Study of Bentonite Suspensions. 2. The Action of Sodium
Hydroxide with Time on Suspensions of Electrodialyzed Ascangel

        dialyzed bentonite.
        There are 4 diagrams and 15 references, 5 of which are Soviet,
        6 English, 3 American, and 1 German.

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko
        (Kiyev State University imeni T.G. Shevchenko)
        Ukrainskaya akademiya sel'skokhozyaystvennykh nauk
        (UkrainianAcademy of Agricultural Sciences)

SUBMITTED: April 7, 1957
        1. Clays—Chemical reactions

Card 3/3

`5(

SOV/69-21-2-18/22

AUTHORS: Uskov, I.A. and Uskova, Ye.T.

TITLE: The Electrochemical Study of Bentonite Suspensions (Elektrokhimicheskoye izucheniye bentonitovykh suspenziy).
3. Potentiometric and Conductometric Titration of an Electrically Dialyzed Ascangel With Hydrooxides of Alkali Metals (3. Potentsiometricheskoye i konduktometricheskoye titrovaniya suspenzii elektrodializovannogo askangelya gidrookisyami shchelochnykh metallov)

ABSTRACT: The experiments were suggested by the circumstance that the problems of fixation and localization of cations in the lattice of silicates of aluminium are still objects of discussion. There is no generally accepted opinion, for instance, concerning the cation absorbing qualities of clays. Problems of this kind however, connected with the clayish minerals of the montmorillonite group, which have a great absorbency and a number of special qualities resulting from their extensible lattice, are of special

Card 1/4

SOV/69-21-2-18/22

The Electrochemical Study of Bentonite Suspensions. 3. Potentiometric
and Conductometric Titration of an Electrically Dialyzed Ascangel With
Hydrooxides of Alkali Metals.

interest and give hope of new results. The authors carried
out the titration of a suspension of an electrically-dialy-
zed askangel with hydroxides of lithium, sodium, potassium,
rubidium and cesium and came to the following conclusions:
1) the potentiometric curves obtained at once at the add-
ing of sodium, potassium, rubidium and cesium hydroxides
are characterized by one inflexion at pH 8-8.5. In the
case of lithium hydroxide, the curve has a second inflex-
ion at pH 10.4. After 24 hours this inflexion shows it-
self on all curves; 2) in the course of time the point
of the first inflexion is displaced to the side of the
large quantities of absorbed bases in dependence on the
nature of the cation; 3) the relative change in the
electric conductivity of the suspension at the addition
of hydroxides has been calculated according to the incli-
nation of the initial section of the conductometric tit-
ration curves. In the course of time this inclination

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The Electrochemical Study of Bentonite Suspensions. 3. Potentiometric
and Conductometric Titration of an Electrically Dialyzed Ascangel With
Hydrooxides of Alkali Metals.

decreases for lithium, cesium and rubidium bentonites.
Its various values determine the dissociation degree of
the differently substituted bentonites; Li-bentonite
dissociates most, Na-bentonite a little more weakly and
K- Rb- and Cs-bentonites dissociate to a considerably
lesser degree; 5) the measures of the ions in a non-
hydrated state and their polarizability are of import-
ance during the process of penetration to the exchange
sites of the montmorillonite lattice; 6) an equal ab-
sorbency of bentonite for all cations to be determined
potentiometrically may exist, provided equilibrium is
attained in the system. There are 3 graphs and 11 re-
ferences, 6 of which are German and 5 Soviet.

ASSOCIATION: Kiyevskiy universitet im. T.G. Shevchenko (The Kiyev
University imeni T.G. Shevchenko) Ukrainskaya akademiya
sel'skokhozyaystvennykh nauk (The Ukrainian Academy
Card 3/4   of Agricultural Sciences)

SOV/69-21-2-18/22

The Electrochemical Study of Bentonite Suspensions. 5. Potentiometric
and Conductometric Titration of an Electrically Dialyzed Ascangel With
Hydrooxides of Alkali Metals.

SUBMITTED: April 27, 1957

Card 4/4

5(4)

AUTHOR:

TITLE:

PERIODICAL:

ABSTRACT:

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SOV/69-21-4-19/22

Uskov, I.A. and Uskova, Ye.T.

Electrochemical Studies of Bentonite Suspensions
4. Potentiometric Titration of Various Acid Forms of
Ascangel

Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4, pp 492-498
(USSR)

The authors have carried out the potentiometric titration of
acid forms of ascangel, which were obtained by 1) treatment
of the bentonite with concentrated mineral acid followed by
a quick washing off of excess acid, and 2) passing the mineral
through an H-resin filled column. The article is divided into
three sections: 1) the effect of the concentration of the sus-
pension on the character of the titration curves of electro-
dialyzed ascangel; 2) an investigation of H-ascangel; 3) an
investigation of columnated ascangel suspensions. Graph 1
(section 1) shows the results of the titration of suspension.
In dependence on the increase of the concentration of the sus-

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Electrochemical Studies of Bentonite Suspensions. 4. Potentiometric Titration
of Various Acid Forms of Ascangel

pension, a lowering of the initial and a rise of the last sec-
tion of the potentiometric titration curves can be observed.
All curves are characterized by one point of inflexion in the
weak-alkaline pH region. The position of this point depends on
the concentration of the suspension. With increasing concentra-
tion it shifts to the region of smaller amounts of bound sodium
hydroxide. This shift cannot be explained as an electrochemical
phenomenon. Here the colloid-chemical properties of the suspen-
sions play a decisive role. The phenomenon is due to the inter-
action of the alkali with the active ions on the surface of the
particles as well as with colloid aluminum hydroxide. As a re-
sult, the amount of absorbed base increases in dependence on a
diminution of the concentration of the suspension. For 0.5-
3% concentrations, this magnitude practically remains constant.
The authors conclude that a comparison between potentiometric
curves can be carried out within the limits of certain concentra-
tions, particularly from 0,5 to 3%. The results of the investi-
gation as described in sections 2 and 3 can be summarized as

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Electrochemical Studies of Bentonite   Suspensions.4. Potentiometric Titra-
tion of Various Acid Forms of Ascangel

follows. In contrast to electrodialyzed bentonite, which
appears as Al-H-bentonite, the cation exchange capacity
of H-bentonite at the titration with various alkalis has
one and the same value. The real maximum cation exchange
capacity of bentonite can be determined by potentiometric
titration of a diluted (o,5-1%) H-bentonite suspension with
a strong base. The columnation of natural ascangel through
H-resin results in the formation of an acid form of bentonite,
in which the acidity is caused partly by H and partly by
Al exchange ions. The insufficient replacement of exchange
cations by hydrogen finds its explanation in the small ex-
change capacity of the cationite and its comparatively low
activity. The potentiometric titration of electrodialyzed
ascangel columnated through H-resin bears witness to the
presence of a considerable amount of adsorbed H-ions in the
suspension. Columnation of electrodialyzed ascangel through
Al-resin results in the formation of Al-bentonite, which

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Electrochemical Studies of Bentonite Suspensions. 4. Potentiometric Titra-
tion of Various Acid Forms of Ascangel

coagulates on the surface of cationite grains and chokes
the column. A comparison of the results of columnation of
the suspension of electrodialyzed bentonite through H- and
Al-resins confirms that its acidity is caused by the simul-
taneous presence of adsorbed H- and Al- ions. With increase
in the concentration of suspensions of electrodialyzed as-
cangel, the jump of the potential on potentiometric curves
in the region of saturation becomes more distinct. At the
same time the amount (referred to 1 g bentonite) of base
neutralized by the bentonite, first sharply decreases, but
subsequently remains practically constant within a large in-
terval of concentrations. The determination of the cation
exchange capacity by the point of inflexion on the curves
of potentiometric titration will be preferably carried out
on H-bentonite suspension, whose concentration lies within
Card 4/5   certain limits (0.5-2% for ascangel). The article was de-

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Electrochemical Studies of Bentonite Suspensions. 4.Potentiometric Titra-
tion of Various Acid Forms of Ascangel

livered as a report at the 4th All-Union Conference of
Colloid Chemistry in Tbilisi in 1958. There are 5 graphs
and 8 references, 4 of which are Soviet and 4 American.

ASSOCIATION: Kiyevskiy universitet imeni T.G. Shevchenko (Kiyev Univer-
sity imeni T.G. Shevchenko) Ukrainskaya akademiya sel'skok-
hozyaystvennykh nauk (Ukrainian Academy of Agriculutral
Sciences)

SUBMITTED: 4 March, 1958

Card 5/5

USKOV, I.A.; USKOVA, Ye.T.

Electrochemical study of bentonite suspensions. Part 6: Potentiometric titration of aminobentonite complexes [with summary in English]. Koll.zhur 23 no.4:469-474 Jl-Ag '61.

(MIRA 14:8)

1. Kiyevskiy universitet im. T.G. Shevchenko i Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Bentonite) (Potentiometric analysis)

GORB, T.F.; USKOVA, Ye.T.

Some physicochemical properties of kieselguhr from the
Kirovograd deposit. Trudy KTIPP no.25:98-101 '62.

(Kirovograd Province—Diatomaceous earth)   (MIRA 16:5)

GORB, T. F.: POLYACHENKO, M. M.; USKOVA, Ye. T.; ARTEMENKO, M. V.

Changes in some physicochemical properties of syrup occurring
during filtration through kieselguhr. Izv.vys.ucheb.zav.;
pishch.tekh. no. 2:60-61   '64.   (MIRA 17:5)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlen-
    nosti, kafedra obshchey i neorganicheskiy khimii.

USKOVSKIY, Vsevolod Andreyevich

[Theory of probabilities] Teoriia veroiatnostei. Moskva, Voenno-
morskoe izd-vo, 1953. 319 p.   (MLRA 7:6)
        (Probabilities)

4633. Vapour Pressures of Solutions of Acids and Salts in Liquid Ammonia. A. I. Schattenstein and L. S. Unkown. *Acta Physicochimica,* 2. 3. pp. 337-344. 1935. *In German.*—Measurements are made of the lowering of the vapour pressures of solutions of NH_4Cl, NH_4Br, NH_4I, NH_4NO_3, $NH_4C_2H_3O_2$, $NaCl$, and $NaNO_3$ in liquid ammonia at 15° C. and in the case of $NaCl$ at 10° C. The densities of some of the solutions are also measured. The values of the osmotic coefficients for a range of concentrations of these electrolytes in liquid ammonia are derived and compared with the results of other workers.   R. W. P.

METALLURGICAL LITERATURE CLASSIFICATION

US—KRASOVEC, Marija

Cytodiagnosis of pulmonary carcinoma. Tuberkuloza 17 no.1/2:44-49
Ja-Ap'65.

1. Onkoloski institut, Ljubljana (Direktor: prof. dr. Bozena
Ravnihar).

MAMYKIN, P.S.; HERUPU[...] [...], [...].

Slap resistance of refractory products. Ogneupory 30 no.3:36-4[...]
'65.   (MIRA 18:5)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.

MAMYKIN, P.S.; USKUMBAYEV, N.U.; RAVDANIS, B.I.; YAKUSHEV, Ye.A.; PSHENBAYEV, R.G.;
    SIMKIN, E.A.

    Testing high-alumina refractories. TSvet.met. 38 no.3:35-36 Mr '65.
                                                          (MIRA 18:6)

CHIKULAYEV, S.; LARIN, D., inzh.; YEFIMOV, M.; CHERNYAVSKIY, E.I., inzh.;
USLISTYY, B.S., inzh. po tekhnike bezopasnosti (Donetskaya oblast',
gorod Ukrainsk)

Letters to the editors. Bezop.truda v prom. 9 no.4:54-55 Ap '65.
(MIRA 18:5)

1. Zamestitel' glavnogo inzhenera po tekhnike bezopasnosti,
priisk Leninskiy, Yakutskaya ASSR (for Chikulayev). 2. Upravleniye
Yuzhno-Kazakhstanskogo okruga Gosudarstvennogo komiteta pri Sov.
Ministrov KazSSR po nadzoru za bezopasnym vedeniyem rabot v
promyshlennosti i gornomu nadzoru (for Larin). 3. Institut
tekhnicheskoy informatsii i ratsionalizatsii Berezovskogo rudnika
imeni Kirova (for Yefimov). 4. Ural'skiy nauchno-issledovatel'skiy
i proyektnyy institut mestnoy promyshlennosti, Sverdlovsk (for
Chernyavskiy).

USLONTSEV, B., naukoviy spivrobotnik; BEREZHNIY, M.

Mechanized production of three-step slag blocks. Sil'.bud. 9
no.6:9-10 Je '59.   (MIRA 12:9)

1. Sektor tekhnologii i organizatsii sil'skogo budivnitstva
Akademii budivnitstva i arkhitekturi URSR (for Uslontsev). 2.Golova
radi Izyums'koi mizhkolgospnoi budivel'noi organizatsii Khar'kivs' -
koi oblasti (for Berezhniy).
                    (Izyum District--Concrete blocks)

USLONTSEV, B., nauchnyy sotrudnik; BEREZHNYY, M.

Using assembly-line methods in constructing livestock buildings with arched roofs. Sil' bud. 9 no.8:13-16 Ag '59.   (MIRA 12:12)

1.Sektor tekhnologii i organizatsii sel'skogo stroitel'stva Akademii stroitel'stva i arkhitektury USSR (for Uslontsev). 2.Predsedatel' Izyumskoy mezhkolkhoznoy stroitel'noy organizatsii Khar'kovskoy oblasti (for Berezhnyy).
    (Kharkov Province--Farm buildings) (Assembly-line methods)

USLONTSEV, B., nauchnyy sotrudnik; BEREZHNOY, N.

Using three-step blocks in building cow barns. Sel', stroi. 14
no.11:9-11 N '59   (MIRA 13:3)

1. Akademiya stroitel'stva i arkhitektury USSR (for Uslontsev).
2. Predsedatel' Izyumskogo mezhkolkhozstroya (for Berezhnoy).
        (Izyum District--Dairy barns) (Building blocks)

USLONTSEV, B.; YUROVSKIY, V. [IUrovs'kyi, V.]; ZADORIN, M.

Using low-line methods in constructing livestock buildings
in Crimean villages. Bil'.bud. 10 no.8:6-9 Ag '60.
(MIRA 13:8)

1. Nachal'nik gruppy sektora tekhnologii i organizatsii
sel'skogo stroitel'stva Akademii stroitel'stva i arkhitektury
USSR (for Uslontsev). 2. Nachal'nik upravleniya stroitel'-
stva Krymskogo oblsel'khozupravleniya (for Yurovskiy).
3. Glavnyy inzhener Simferopol'skogo mezhkolkhozstroya (for
Zadorin).
                    (Crimea--Farm buildings)

USLONTSEV, B.; KOBA, G. [Koba, H.]

Arched livestock buildings are being built by production-line methods.
Sil'. bud. 10 no.11:7-10.N '60.   (MIRA 13:11)

1. Rukovoditel' gruppy sektora tekhnologii i organizatsii stroitel'stva
Akademii stroitel'stva i arkhitektury USSR (for Uslontsev). 2. Ruko-
voditel' soveta Yavorovskoy mezhkolkhoznoy stroitel'noy organizatsii
L'vovskoy oblasti (for Koba).
              (Lvov Province--Farm buildings)
          (Collective farms--Interfarm cooperation)

USLONTSEV, B.

Production-line construction of buildings at accelerated speed
and lowered cost. Sil'.bud. 12 no.7:7-11 Jl '62.
(MIRA 15:8)

1. Ispolnyayushthiy obyazannosti rukovoditelya sektora tokhnologii
i organizatsii sel'skogo stroitel'stva Akademii stroitel'stva i
arkhitektury UkrSSR.
              (Ukraine—Construction industry)

IVANTISHIN, Mikhail Mikolayevich; GORNYY, Georgiy Yakovlevich; KOLESNYA, Ol'ga Adol'fovna; YELISEYEVA, Galina Dmitriyevna, Prinimali uchastiye: GAVRILOVA, L.F., inzh.-khimik; KAZANTSEVA, A.I., inzh.-khimik; LOGVINA, L.A.,inzh.-khimik; UGLENTSEVA, L.A., inzh.-khimik; GUDIMENKO, L.F., inzh.; NAZAREVICH, Ye.S., inzh.; SHKVARUK, R.N., inzh.; ORLOVA, I.A., inzh.; BASHMAKOVA, I.G., inzh.-geolog; BURKSER, Ye.S., otv. red.; MEL'NIK, A.F., red.

[Geochemistry and analytic chemistry of rare-earth elements. Pt.1. Accessory rare-earth minerals and elements of the cerium subgroup in the Ukrainian Crystalline Shield] Geokhimiia i ana- liticheskaia khimiia redkozemel'uykh elementov. Kiev, Naukova dumka. Pt.1. Aktsessornye redkozemel'nye mineraly i elementy tserievoi podgruppy ukrainskogo kristallicheskogo shchita. 1964. 164 p. (Akademiia nauk URSR. Instytut geologicheskikh nauk. Trudy. Seriia petrografii, mineralogii i geokhimii, no.20).

1. Chlen-korrespondent AN USSR (for Burkser).

USMAN, V.B. (Moskva)

Electrocardiographic changes in angioneurotic edema. Klin.med.
no.1:142-144 '62.   (MIRA 15:1)

1. Iz terapevticheskogo otdeleniya (nauchnyy rukovoditel' –
kand.med.nauk N.TS. Bagom) Moskovskoy gorodskoy bol'nitsy No.58
(glavnyy vrach – dotsent Ye.Ya. Khesin).
          (ELECTROCARDIOGRAPHY)   (EDEMA)

USMAN, V.B.

Eosinophilic type leukemoid reaction in a rheumatic female
patient following treatment with fonurit. Vop.revm. 2 no.3:
82-84 Jl-S '62.   (MIRA 16:2)

1. Iz terapevticheskogo otdeleniya (nauchnyy rukovoditel' - kand.
med.nauk M.TS. Bagon) Moskovskoy gorodskoy bol'nitsy No.58
(glavnyy vrach - dotsent Ye.Ya. Khesin).
         (RHEUMATIC HEART DISEASE)   (EOSINOPHILES)
                (THIADIOZOLESULFONAMIDE)

MARKMAN, A.L., doktor khim.nauk; CHEBOTAREVA, A.P.; USMAIBEKOVA, U.

Increasing the oil content of cottonseeds. Masl.-zhir.prom.
26 no.2:11-13 F '60.   (MIRA 13:5)

1. Sredneaziatskiy politekhnicheskiy institut.
            (Cottonseed oil)

MARKMAN, A.L., doktor khim.nauk; KATS, B.A., kand.tekhn.nauk; CHEBOTAREVA, A.P.;
DUBROVINA, M.N.; USMANBEKOVA, U.

Raising the oil content of cottonseeds. Report No.2. Masl.-zhir.
prom. 27 no.5:18-20 My '61.   (MIRA 14:5)

1. Akademiya nauk UzSSR (for Markman). 2. Sredneaziatskiy filial
Vsesoyuznogo nauchno-issledovatel'skogo instituta zhirov (for Kats,
Chebotareva, Dubrovina, Usmanbekova).
                        (Cottonseed)

USMANKHODZHAYEV, A.; ZAKSTELSKAYA, L.Ya.

Stability of reovirus haemagglutinins. Acta virol (Praha)
[Engl] 8 no.1:84-87 Ja'64.

1. Ivanovsky Institute of Virology, U.S.S.R. Academy of
Medical Sciences, Moscow.

GURVICH, E.R.; MILUSHIN, V.N.; SHATKIN, A.A.; USMANKHODZHAYEV, A.;
ZAKSTEL'SKAYA, L. Ya.

Aid to virologist. Vop. virus. 10 no. 6:734-743 N-D '65
(MIRA 19:1)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh
preparatov (for Gurvich, Milushin). Submitted August 28, 1964.
2. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva
(for Shatkin). Submitted November 29, 1964. 3. Institut viruso-
logii imeni D.I. Ivanovskogo AMN SSSR, Moskva (for Usmankhodzhayev,
Zakstel'skaya). Submitted January 13, 1964.

USMANKHODZHAYEV, Kh. Kh.

Dissertation: "Some Questions on the Kinematics and Dynamics for Changing the Bobbins of Automatic Looms." Cand Tech Sci, Inst of Machine Science, Acad Sci USSR, 16 Jun 54. (Vechernyaya Moskva, Moscow, 7 June 54)

SO: SUM 318, 23 Dec 1954

USMANKHODZHAYEV, Kh.Kh., kandidat tekhnicheskikh nauk.

Safety factor for the automatic weft-replenisher on a ChGSP loom.
Tekst.prom. 15 no.12 no.12:38-39 D '55.   (MLRA 9:3)
(Looms)

USMANKHODZHAYEV, Kh.Kh., kand.tekhn.nauk

Differential equation for the movement of battening devices
taking their weight into consideration. Sbor. nauch.-issl. rab.
TTI no.3:68-74 '56.   (MIRA 11:9)
                    (Mechanical movements) (Looms)

USMANKHODZHAYEV, Kh.Kh., dotsent

Using the equation of dynamics of the variable mass for determining
the force of inertia of the loom batten. Sbor.nauch.-issl.rab.TTI
no.12:163-164 '61.   (MIRA 15:11)
                        (Looms—Testing)

USMANKHODZHAYEV, Kh.Kh.; KUZIBAYEV, G.S.

Motion equation for the driving link of a crank mechanism taking into consideration the friction in kinematic pairs. Izv. AN Uz. SSR. Ser. tekh. nauk 9 no.3:38-46 '65.　　(MIRA 18:8)

1. Institut mekhaniki i Vychislitel'nyy tsentr AN UzSSR.

USMANKHODZHAYEV, Kh.Kh.

A universal apparatus for tracing and analyzing the roulettes
of points of the satellite of epicyclic mechanisms. Dokl. AN
Uz. SSR 21 no.9:14-16 '64.   (MIRA 19:1)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN
UzSSR.

USMANKHODZHAYEV, Kh.Kh.

Differential equation describing the motion of a class II plane
mechanism with Assur's group of the 2d modification. Dokl.
AN SSR 21 no. 11:13-16 '64.   (MIRA 18:12)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN UzSSR.
Submitted June 30, 1964.

KHAMUDKHANOV, M.Z.; USMANKHODZHAYEV, N.

Frequency method for the speed control of a capacitor asynchronous motor. Izv.AN Uz.SSR Ser.tekh.nauk no.5:3-18 '60.   (MIRA 14:9)

1. Institut energetiki i avtomatiki AN UzSSR.
                         (Electric motors, Induction)

KHAMUDKHANOV, M.Z., doktor tekhn.nauk; USHANKHODZHAYEV, N.M., inzh.

Frequency regulation of the speed of two-phase asynchronous motors.
Vest. elektroprom. 33 no.8:12-17 Ag '62.   (MIRA 15:7)
(Electric motors, Induction)

KHAMUDKHANOV, M.Z.; AKHMEDOV, I.; USMANKHODZHAYEV, N.M.

Developing the principle of changes in the magnetization current
of a saturation choke coil controlling the d.c. drive with indepen-
dent excitation depending on the load type. Izv.AN Uz.SSR.Ser.tekh.
nauk 9 no.5:9-16 '65.   (MIRA 18:10)

1. Uzbekskiy nauchno-issledovatel'skiy institut energetiki i
avtomatiki.

KHAMUDKHANOV, M.Z.; USMANKHODZHAYEV, N.M.

Braking modes of single-phase asynchronous condenser motors.
Izv. AN Uz.SSR.Ser.tekh.nauk 8 no.4:13-20 '64.   (MIRA 18:4)

1. Institut energetiki i avtomatiki AN UzSSR.

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-   M-5
              Bearing.

Abs Jour   : Ref Zhur - Biol., No 20, 1958, 91751

Author   : Usmanov, A.
Inst   : -
Title   : Ways of Increasing the Cotton Crops on the Soils of
              Golodnaya Steppe.

Orig Pub   : Khoplkovodstvo, 1958, 4, 46-47.

Abstract. : No abstract.

Card 1/1

YENGULATOV, I.A., kand. tekhn. nauk (Tashkent); YEREMENKO, G.V., inzh.
(Tashkent); USMANOV, A., inzh. (Tashkent)

Planned or "critical" depth of ground waters. Gidr. i mel. 16
no.7:21-30 Jl '64.
(MIRA 17:11)

USMANOV, A.A.

Changes in cardiac activity during surgery under spinal anesthesia. (MIRA 16:2)
Zdrav.Kazakh. 22 no.11:16-21 '62.

1. Iz kafedry gospital'noy khirurgii (zav. - prof. M.I. Bryakin)
Kazakhskogo meditsinskogo instituta.
            (SPINAL ANESTHESIA) (ELECTROCARDIOGRAPHY)

USMANOV, A.G.

Principles for calculating the zone of the homogeneous quasistatic reaction in a turbulent flow of constant density. Trudy KKHTI no.13: 90-100 '48.   (MIRA 12:12)

1.Kazanskiy khimiko-tekhnologicheskiy institut im. S.M. Kirova, kafedra teplotekhniki.
                (Turbulence)

USMANOV, A. G.

Usmanov, A. G. "Principles of calculating zones of a homogeneous quasi-static reaction in a turbulent stream of constant density," Trudy Kazansk. khim.-tekhnol. in-ta im. Kirova, Issue 13, 1948, p. 90-100 - Bibliog: 10 items

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, no. 3, 1949)

D'YAKONOV, G.K.; USMANOV, A.G.

On the similitude of physicochemical processes. Trudy KKHTI
no.16:37-42 '51 [Publ. '52].   (MIRA 12:12)
   (Chemical reaction--Conditions and laws) (Dimensional analysis)

D'YAKCHOV, G.K. [deceased]; ZAITOV, ...; BLYSHEV, V.P.; KOTOVSKIY Ye., L...;
     OSTROV, O.K.; USINOV, A.G.

     Investigating the tensor term field of force m s for the emit air of
     butadiene. Trudy KKHTI no.1:313-321 '63 [publ. '64].   (MIRA 18:11)
          (Butadiene)   (Temperature--Measurement)   (Furnaces)

USMANCV, A. G.

PHASE I BOOK EXPLOITATION   SOV/3396

Akademiya nauk SSSR. Energeticheskiy institut

Konvektivnyy i luchistyy teploobmen (Convection and Radiation Heat Exchange)
Moscow, Izd-vo AN SSSR, 1960. 254 p. Errata slip inserted. 3,200 copies printed.

Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gornakov; Tech. Ed.: V.V. Bruagul'.

PURPOSE: The book is intended for scientists and engineers working in various branches of science and industry concerned with thermodynamics and heat transfer problems.

COVERAGE: The book consists of 19 original articles on various problems in thermodynamics. The following subjects are discussed: mechanics of heat transfer processes, intensification of heat exchange, determination of thermophysical properties of operating media, heat transfer in supersonic flow of gas, and combustion chambers and nuclear reactors. Theory and experimental techniques are described. Each article describes the conditions of the experiment and tables of the experimental data obtained are given. The data may be used for calculations of heat transfer and heat exchangers, always taking account of...

AVAILABLE: Library of Congress

SOV/58-59-5-10464

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 92 (USSR)

AUTHORS: Usmanov, A.G., Berezhnoy, A.N.

TITLE: Generalization of Experimental Data on the Diffusion of Vapors

PERIODICAL: Tr. Kazansk. khim.-tekhnol. in-ta, 1958, Nr 22, pp 115 - 122

ABSTRACT: The dependence of mean relative diffusion flows in a gaseous medium
              have been obtained (A.G. Usmanov, Tr. KKhTI, 1958, Nr 22). Using the
              similarity method on these data, the authors arrive at a generalized
              dependence of the diffusion coefficient on the entropy of the system
              at various temperatures in the case of an isothermal process. With
              the aid of these generalized dependences, diffusion coefficients are
              determined for a series of binary and single-component mixtures in a
              wide range of temperatures. Deviations from the experimental data do
              not exceed 2% for the majority of the diffusion coefficients. It is
              noted that similar generalized dependences yielded a satisfactory

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Generalization of Experimental Data on the Diffusion of Vapors

result on generalizing experimental data pertaining to viscosity and thermal conductivity in the gaseous phase. (Usmanov, A.G., Bol'shov, V.R., Tr. KKhTI, 1958, Nr 22).

L.P. Kholpanov

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USMANOV, A.G.

57-2-20/32

AUTHORS: Grigor'yev, L. N. , Usmanov, A. G.

TITLE: Emission of Heat in the Boiling of Binary Mixtures (Teplootdacha pri kipenii binarnykh smesey)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 2, pp. 325-332, (USSR)

ABSTRACT: The dependence of the coefficients of dissipation of heat on the composition of the mixture is investigated here and an attempt is made to determine the mechanism of the process in the boiling of the mixtures. At first the influence upon the mechanism of the process of steam-generation in the boiling of binary mixtures is investigated and it is shown that the data existing in publications are very contradictory. For this reason the investigation of the process of heat emission was performed during the boiling of some binary mixtures. The tests were made on a large scale at natural convection under atmospheric pressure. Two apparatus were erected, a large one with windows in which a visual observation and the photographing of the boiling process of the mixture of ethyl alcohol and water

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Emission of Heat in the Boiling of Binary Mixtures

took place, and a small apparatus in which the fundamental
tests on the emission of heat during the boiling of the mix-
tures were made. The two apparatus did not differ in their
mode of operation. Based on the tests the following was found:
1.) The mechanism of the boiling process of binary mixtures
considerably differs from that of one-substance liquids.
2.) The composition of the boiling mixture influences the pro-
cess of heat emission during boiling. This influence takes
effect in the dependence of the value of the radius of curva-
ture at the smallest nodule of unevenness, which acts as cen-
ter of steam-generation, on the concentration of the boiling
mixture. 3.) An equation (7) is derived here for the determi-
nation of the radius of curvature of the smallest nodule of
unevenness acting as center of steam generation in the boil-
ing of binary mixtures of liquids. This equation was confirm-
ed in a qualitative respect. 4.) The coefficients of heat
emission in the boiling of binary mixtures are considerably
smaller than those of pure components of which the mixture
consist. At a certain concentration of the mixture a well
marked minimum of the function $\alpha = f(x_1)$ is observed. x_1-
-Mol-concentration according to the component with lower boil-

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Emission of Heat in the Boiling of Binary Mixtures

ing point index "1" refers to the liquid. The authors were **given advice** by G. M. Kruchilin, Corresponding Member of the AS USSR. There are 2 figures, and 8 references, 5 of which are Slavic.

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AVAILABLE: Library of Congress

1. Binary compounds-Heat emission

Card 3/3

USMANOV, A. G., Doc Tech Sci (diss) -- "A generalization of experimental data

on the processes of transfer in gases". Moscow, 1959. 24 pp (Acad Sci USSR,

Power Engineering Inst im G. M. Krzhizhanovskiy), 150 copies (KL, No 22, 1959,

113)

USMANOV, Aytugan Garifovich (Kazan' Chemical Technological Institute imeni Kirov), for Doctor of Technical Sciences on the basis of the dissertation defended 11 June 1959 in the Council of the Power Engineering Institute imeni Krzhizhanovskiy, Acad. Sci. USSR, entitled: "Generalization of experimental data on processes of transfer data in gases." (BMViSSO USSR, 2-61, 17)

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USMANOV A. G.

SOV/1826

24(8)   PHASE I BOOK EXPLOITATION

Akademiya nauk SSSR. Energeticheskiy institut

Teploperedacha i teplovoye modelirovaniye (Heat Transfer and
Modeling of Heat Processes) Moscow, Izd-vo AN SSSR, 1959.
419 p. Errata slip inserted.   3,500 copies printed.

Resp. Ed.: M. A. Mikheyev, Academician; Ed. of Publishing
House: D. A. Ivanova; Tech. Ed.: G. M. Shevchenko.

PURPOSE: The book is intended for scientists concerned with heat
transfer, heat emission, and hydraulics of liquid metals, etc.

COVERAGE: This collection is dedicated to the memory of Academician
M. V. Kirpichev who in the twenties initiated a systematic
investigation of heat transfer processes and the efficiency of
heat apparatus. Later he led the development of research work in
this field. Two special collections devoted to works of Kirpichev's
school have been published, one in 1938, Materialy soveshchaniya
po modelirovaniye (Materials of the Conference on Modeling) and in
1951, Teoriya podobiya i modelirovaniye (Theory of Similitude
and Modeling). The present collection prepared in 1956 represents
further development of the work of this school. This theory is
fundamental for the analysis of many heat problems in the field of
electrical and radio engineering. Of great importance are the
first systematic investigations of heat transfer and the
hydraulics of liquid metals which as a new kind of heat carrier
may be used in the various branches of modern engineering. As a
result of special investigations of some cases of convective
heat transfer, a dependence of the process on the kind of liquid,
temperature, pressure, direction of the heat flow, and other
factors, was discovered and established. On the basis of a wide
generalization of experimental data, new dependable recommendations
for heat analysis of engineering equipment were developed. Of no
less interest is the work on heat transmission in boiling liquids
and the condensation of vapors. All investigations are based on
the theory of similitude, the nature of which, according to M. V.
Kirpichev, is that of "experimentation." Work on the theory of
a regular regime applied to a system of bodies with an internal
source of heat is of interest for the future.

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Usmanov, A. G.   On One Supplementary Condition of Similarity of   298
Molecular Processes

One supplementary condition of similarity of molecular
processes was established consisting of the requirement
of identity of density fields of the probability distribution.
Similarity equations describing the kinetics of molecular
processes of transfer were established. Experimental data on
viscosity and heat conductivity of gases are generalized.
There are 13 references: 10 Soviet and 3 English.

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Heat Transfer (Cont.)   SOV/1826

Usmanov, A. G., and V. P. Bol'shov. Generalization of Experimental
Data on the Viscosity and Heat Conductivity of Steam
This generalization depends on the knowledge of coefficients
of heat conductivity λ and of the dynamic viscosity γ. The
average values of these coefficients are determined by graphic
$\gamma - y$ (t) and λ-λ (t) drawn according to experimental data for
various pressures. The method described was verified on the
example of a wide range of temperatures and pressures of steam.
The generalized relations may be used to increase knowledge of
heat conductivity and viscosity coefficients of steam, without
further experiments. D. L. Timrot and K. B. Vargaftik are
mentioned in relation to experimental data and the equation of γ.
There are 5 references: 4 Soviet and 1 English.

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B014/B014

AUTHORS: Grigor'yev, L. N.,   Usmanov, A. G.

TITLE: Heat Exchange in Boiling Azeotropic Mixtures

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Vol 2, Nr 11, pp 114-118 (USSR)

ABSTRACT: Formula (1) which represents the dependence of the radius of cur-
vature Q_0 of the smallest elevations acting as evaporation centers
upon the composition of the boiling mixture, was derived by the
authors in an earlier paper (Ref 1) for the heat exchange in boil-
ing binary, azeotropic mixtures. In the present paper, the authors
studied the effect of the complex B in equation (1), which is re-
presented in equation (3). The effect of the quantity B on the
heat-exchange coefficient of B represented in (4) are studied separately.
The sign of the factors of B represented in (4) are studied separately.
sitive according to the composition of the mixture. According to
Storonkin, the sign of the right-hand expression of (4) is obtain-
ed from formula (5). This sign is shown to depend on the difference
in evaporation heat of the two components of the mixture. For the
major part of the non-azeotropic mixtures studied by the authors
the last-mentioned expression has a negative sign (Table 1). Fig-
ure 1 further indicates that the sign of the differential expression
denoted by B has a positive sign for seven of the investigated

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Heat Exchange in Boiling Azeotropic Mixtures

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mixtures. Therefore, complex B has a negative sign, and Q_o must have a maximum and, consequently, the heat-exchange coefficient a minimum which depends on the composition of the boiling mixture. These theoretical considerations were confirmed by experimental results (Ref 1). Results of experiments performed on three azeotropic mixtures are graphically shown in figures 2-4. The right-hand expression of (4) had a positive sign for two of the three mixtures. The left-hand expression of (4) had a maximum or minimum for all of the three mixtures, which means that it had reversed signs before and after attaining the bend point. It is thus possible to explain the fact that the heat-exchange coefficient of azeotropic mixtures has a maximum and a minimum (Figs 2-4). There are 4 figures, 2 tables, and 4 Soviet references.

SSOCIATION: Khimiko-tekhnologicheskiy institut im. S. M. Kirova, g. Kazan'
(Institute of Chemical Technology imeni S. M. Kirov, City of Kazan')

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GRIGOR'YEV, L.N.; USMANOV, A.G.

Conditions of similarity for heat transfer during boiling of
binary mixtures. Trudy KKHTI no.26:32-41 '59.   (MIRA 15:5)
    (Heat—Transmission)   (Ebullition)